CHAPTER 7

Wisconsin Expenditures for Energy

Where Learning is Natural

Established in 1994, the Aldo Leopold Nature Center specializes in connecting children, their families and teachers with nature. The mission of the center is based on the philosophy of famous Wisconsin Conservationist Aldo Leopold "...teach the student to see the land, understand what he sees, and enjoy what he understands."

Over the years the Aldo Leopold Nature Center has grown to operate year-round and has nearly tripled the number of visitors to more than 31,000 in 2009. With the growing use of the Center, it became



apparent the facility needed to grow, too. With contributions from many partners and a \$500,000 Recovery Act grant to develop clean energy education, the dream to expand environmental education in Wisconsin grew.

In June of 2010, the center broke ground on an addition to double the environmental teaching capacity to 60,000 students per year and increase usable space by 11,161 square feet. Once completed in 2011, the addition will combine the best of 'high touch' nature education with 'high-tech' and represent a new approach for guiding students to discover, understand and explore complex energy and environmental issues. The high-tech education center is expected to draw in visitors from across the state and the Midwest.

Investing in our Children and Trees for Tomorrow

An organization that, at its foundation, literally grew one tree at a time is now sowing a different type of seedling in the region's youth. Trees for Tomorrow, an independent, nonprofit natural resource specialty school, uses both classroom education and hands-on field studies to teach children and adults the value of resource conservation and management.

Founded in 1944, Trees for Tomorrow was initially focused on the reforestation of Wisconsin's north woods, which had been severely depleted by logging and other practices. By the 1960s, the reforestation of the area was essentially complete, and the organization's focus shifted to



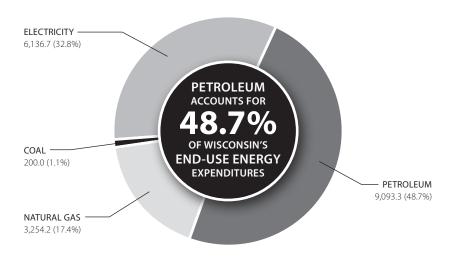
conservation education. The school promotes the message that proper management and responsible use of natural resources are essential, as such resources are limited.

Trees for Tomorrow works mainly with elementary, middle and high school students while also offering adult education courses. During the school year, students from Wisconsin, northern Illinois and Michigan's Upper Peninsula travel to the campus in Eagle River for three-day workshops covering topics such as tree identification, water chemistry, wildlife tracking and many others. Roughly 5,000 students visit Trees for Tomorrow every year.

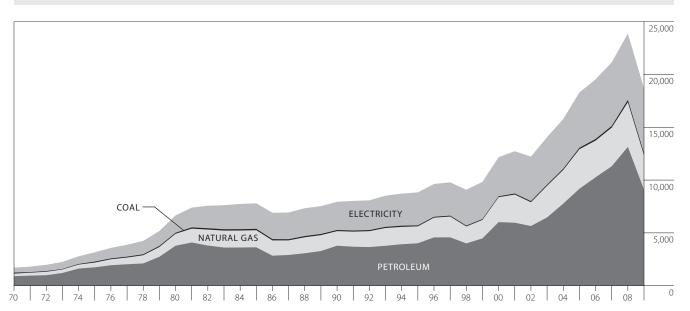
In 2010, Trees for Tomorrow received a \$50,000 Recovery Act grant to develop a clean energy outreach and education program on sustainable forestry and woody biomass. The program is teaching our youth how proper management of a renewable resource will help our state and our nation continue to move in the direction of clean energy and energy efficiency.

Wisconsin End-Use Energy Expenditures, by Type of Fuel

2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL



1970-2009 MILLIONS OF DOLLARS



Source: Wisconsin Office of Energy Independence.

Wisconsin End-Use Energy Expenditures, by Type of Fuel



In 2009, Wisconsin's overall energy bill dropped by 21.7 percent—from \$23.87 billion in 2008 to \$18.68 billion. This decrease of \$5.19 billion brings Wisconsin's energy expenditures close to 2005 levels.

Expenditures decreased for all fuels—petroleum by \$4.0 billion (30.8 percent), natural gas by \$982.5 million (23.2 percent), coal by \$6.7 million (3.3 percent), and electricity \$155.2 million (2.5 percent). Since 2000, Wisconsin's total energy expenditures increased by \$6.5 billion (53.5 percent).

The tables in this chapter show annual expenditures for the major energy resources used by Wisconsin's residential, commercial, industrial, agricultural and transportation sectors since 1970. Because consistent and reliable historic prices of wood, waste fuels and biogas are not available, expenditures for these fuels are excluded from the tables.

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| V | D. t | 1 | N-4 | ıl Car | | -1 | Floor | | Total |
|-------------------|----------|-------|---------|--------|-------|------|---------|--------|----------|
| Year | | oleum | Natura | | Coa | | Elect | ricity | Total |
| 1970 ^r | 895.1 | 52.3% | 247.5 | 14.5% | 90.1 | 5.3% | 477.6 | 27.9% | 1,710.3 |
| 1975 ^r | 1,738.7 | 55.1% | 451.5 | 14.3% | 86.2 | 2.7% | 879.3 | 27.9% | 3,155.7 |
| 1980 ^r | 3,780.7 | 56.8% | 1,135.8 | 17.1% | 89.0 | 1.3% | 1,648.0 | 24.8% | 6,653.4 |
| 1985 ^r | 3,633.5 | 46.6% | 1,621.7 | 20.8% | 121.6 | 1.6% | 2,420.9 | 31.0% | 7,797.7 |
| 1990 ^r | 3,786.0 | 47.7% | 1,381.8 | 17.4% | 102.9 | 1.3% | 2,674.5 | 33.7% | 7,945.2 |
| 1995 ^r | 4,017.0 | 45.5% | 1,606.6 | 18.2% | 85.6 | 1.0% | 3,127.5 | 35.4% | 8,836.7 |
| 1996 ^r | 4,570.6 | 47.5% | 1,868.6 | 19.4% | 81.3 | 0.8% | 3,108.1 | 32.3% | 9,628.6 |
| 1997 ^r | 4,577.2 | 46.8% | 1,975.1 | 20.2% | 80.3 | 0.8% | 3,155.2 | 32.2% | 9,787.9 |
| 1998 ^r | 4,002.1 | 44.1% | 1,608.7 | 17.7% | 78.3 | 0.9% | 3,395.6 | 37.4% | 9,084.7 |
| 1999 ^r | 4,479.0 | 45.5% | 1,752.0 | 17.8% | 74.3 | 0.8% | 3,530.2 | 35.9% | 9,835.5 |
| 2000 ^r | 6,017.5 | 49.5% | 2,365.6 | 19.4% | 80.1 | 0.7% | 3,705.5 | 30.5% | 12,168.7 |
| 2001 ^r | 5,961.8 | 46.8% | 2,671.1 | 21.0% | 90.9 | 0.7% | 4,007.5 | 31.5% | 12,731.3 |
| 2002r | 5,649.3 | 46.2% | 2,252.6 | 18.4% | 101.5 | 0.8% | 4,222.1 | 34.5% | 12,225.5 |
| 2003r | 6,460.9 | 45.9% | 3,001.2 | 21.3% | 98.7 | 0.7% | 4,502.4 | 32.0% | 14,063.3 |
| 2004 ^r | 7,765.6 | 49.2% | 3,196.2 | 20.3% | 109.2 | 0.7% | 4,712.4 | 29.9% | 15,783.5 |
| 2005 ^r | 9,174.4 | 50.1% | 3,752.1 | 20.5% | 128.3 | 0.7% | 5,241.7 | 28.6% | 18,296.4 |
| 2006 ^r | 10,262.7 | 52.5% | 3,476.1 | 17.8% | 146.2 | 0.7% | 5,654.9 | 28.9% | 19,539.9 |
| 2007r | 11,301.3 | 53.4% | 3,666.1 | 17.3% | 151.7 | 0.7% | 6,025.1 | 28.5% | 21,144.2 |
| 2008r | 13,138.2 | 55.0% | 4,236.7 | 17.7% | 206.8 | 0.9% | 6,291.9 | 26.4% | 23,873.6 |
| 2009 ^p | 9,093.3 | 48.7% | 3,254.2 | 17.4% | 200.0 | 1.1% | 6,136.7 | 32.8% | 18,684.3 |

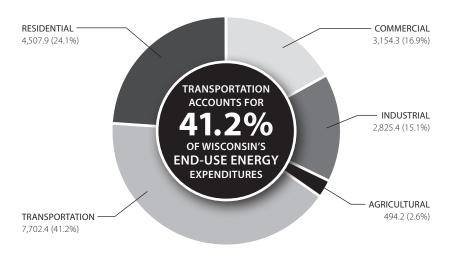
Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal and electricity use and prices, by economic sector,

Preliminary estimates.

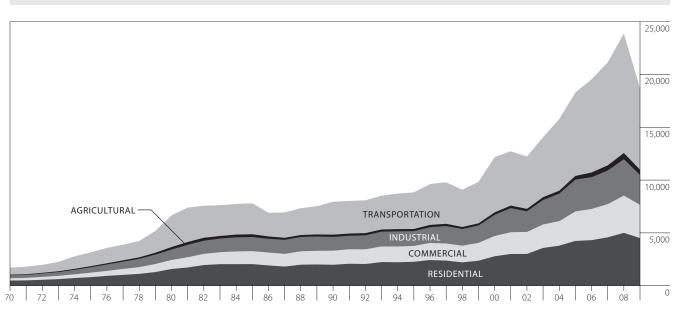
r Revised due to revisions in price and consumption data.

Wisconsin End-Use Energy Expenditures, by Economic Sector

2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL



1970-2009 MILLIONS OF DOLLARS



Source: Wisconsin Office of Energy Independence.

Wisconsin End-Use Energy Expenditures, by Economic Sector



In 2009, energy expenditures decreased in all sectors, with total expenditures decreasing \$5.19 billion or 21.7 percent.

Expenditures in the residential sector decreased by \$494.8 million (9.9 percent), in the commercial sector by \$374.1 million (10.6 percent), in the industrial sector by \$622.8 million (18.1 percent), in the agricultural sector by \$88.0 million (15.1percent), and the transportation sector

saw a drop of \$3.6 billion (31.9 percent).

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Resid | dential | Comn | nercial | Indu | strial | Agricu | ıltural | Transp | ortation | Total |
|-------------------|---------|---------|---------|---------|---------|--------|--------|---------|----------|----------|----------|
| 1970 ^r | 483.5 | 28.3% | 217.9 | 12.7% | 285.2 | 16.7% | 58.7 | 3.4% | 665.0 | 38.9% | 1,710.3 |
| 1975 ^r | 808.2 | 25.6% | 428.4 | 13.6% | 509.4 | 16.1% | 104.9 | 3.3% | 1,304.9 | 41.3% | 3,155.7 |
| 1980 ^r | 1,581.5 | 23.8% | 855.2 | 12.9% | 990.3 | 14.9% | 232.4 | 3.5% | 2,994.1 | 45.0% | 6,653.4 |
| 1985 ^r | 2,044.2 | 26.2% | 1,229.1 | 15.8% | 1,337.1 | 17.1% | 258.8 | 3.3% | 2,928.5 | 37.6% | 7,797.7 |
| 1990 ^r | 1,978.2 | 24.9% | 1,335.8 | 16.8% | 1,302.8 | 16.4% | 215.8 | 2.7% | 3,112.6 | 39.2% | 7,945.2 |
| 1995 ^r | 2,263.5 | 25.6% | 1,504.5 | 17.0% | 1,396.1 | 15.8% | 202.7 | 2.3% | 3,469.8 | 39.3% | 8,836.7 |
| 1996 ^r | 2,428.3 | 25.2% | 1,617.6 | 16.8% | 1,490.6 | 15.5% | 218.6 | 2.3% | 3,873.6 | 40.2% | 9,628.6 |
| 1997 ^r | 2,375.4 | 24.3% | 1,624.5 | 16.6% | 1,649.7 | 16.9% | 209.3 | 2.1% | 3,929.0 | 40.1% | 9,787.9 |
| 1998 ^r | 2,207.4 | 24.3% | 1,582.8 | 17.4% | 1,580.1 | 17.4% | 187.2 | 2.1% | 3,527.2 | 38.8% | 9,084.7 |
| 1999 ^r | 2,365.1 | 24.0% | 1,691.8 | 17.2% | 1,644.5 | 16.7% | 200.0 | 2.0% | 3,934.2 | 40.0% | 9,835.5 |
| 2000 ^r | 2,785.5 | 22.9% | 1,916.4 | 15.7% | 2,002.3 | 16.5% | 237.2 | 1.9% | 5,227.3 | 43.0% | 12,168.7 |
| 2001r | 3,002.1 | 23.6% | 2,062.1 | 16.2% | 2,286.5 | 18.0% | 234.9 | 1.8% | 5,145.7 | 40.4% | 12,731.3 |
| 2002r | 3,006.3 | 24.6% | 2,083.3 | 17.0% | 1,956.8 | 16.0% | 227.1 | 1.9% | 4,952.1 | 40.5% | 12,225.5 |
| 2003r | 3,571.4 | 25.4% | 2,227.5 | 15.8% | 2,321.2 | 16.5% | 258.3 | 1.8% | 5,684.8 | 40.4% | 14,063.3 |
| 2004 ^r | 3,789.0 | 24.0% | 2,319.9 | 14.7% | 2,606.1 | 16.5% | 277.7 | 1.8% | 6,790.8 | 43.0% | 15,783.5 |
| 2005 ^r | 4,238.2 | 23.2% | 2,793.3 | 15.3% | 3,020.4 | 16.5% | 342.7 | 1.9% | 7,901.8 | 43.2% | 18,296.4 |
| 2006 ^r | 4,309.2 | 22.1% | 2,955.1 | 15.1% | 3,009.5 | 15.4% | 444.6 | 2.3% | 8,821.5 | 45.1% | 19,539.9 |
| 2007r | 4,577.8 | 21.7% | 3,145.2 | 14.9% | 3,180.6 | 15.0% | 489.2 | 2.3% | 9,751.4 | 46.1% | 21,144.2 |
| 2008r | 5,002.7 | 21.0% | 3,528.4 | 14.8% | 3,448.2 | 14.4% | 582.3 | 2.4% | 11,311.9 | 47.4% | 23,873.6 |
| 2009 ^p | 4,507.9 | 24.1% | 3,154.3 | 16.9% | 2,825.4 | 15.1% | 494.2 | 2.6% | 7,702.4 | 41.2% | 18,684.3 |

Source: Compiled from tables in this publication for Wisconsin residential, commercial, industrial, agricultural and transportation energy use and prices, by type of fuel.

p Preliminary estimates.

r Revised due to revisions in price and consumption data.

Wisconsin Resource Use Energy Expenditures, **Estimated Dollars Leaving Wisconsin**

Of all petroleum energy expenditures, 85 percent are estimated to leave the state because petroleum refining operations are not located in Wisconsin, with the exception of Murphy Oil in Superior. The 15 percent estimated to stay in the state is due to Wisconsin-based gasoline and diesel blenders and retailers, LP and heating oil businesses, and utility revenues. Natural Gas production occurs out-of-state and natural gas pipelines are owned by out-of-state companies. The 15 percent estimated to stay in Wisconsin is attributed to in-state natural gas distribution businesses, LP businesses, and utility revenues.

Ninety-five percent of all expenditures on coal leave Wisconsin because this is an out-of-state resource. The five percent of expenditures estimated to stay in-state are attributed to utility revenues. All of the expenditures on imported electricity are necessarily attributed to out-of-state expenditures because this electricity is purchased from generation sources not based in Wisconsin.

1970-2009 MILLIONS OF DOLLARS

| | Petroleum | | Natur | al Gas | Co | al | Imported | Electricity | Total |
|-------------------|--------------|---------------------------------|--------------|---------------------------------|--------------|---------------------------------|--------------|---------------------------------|---------------------------------|
| Year | Expenditures | Expenditure Leaving State | Expenditures | Expenditure Leaving State | Expenditures | Expenditure Leaving State | Expenditures | Expenditure Leaving State | Expenditure Leaving State |
| 1970 | 900.3 | 765.2 | 260.6 | 221.5 | 177.1 | 168.2 | -47.7 | -47.7 | 1,107.3 |
| 1975 | 1,754.4 | 1,491.3 | 467.8 | 397.6 | 273.5 | 259.8 | -50.5 | -50.5 | 2,098.2 |
| 1980 | 3,804.6 | 3,233.9 | 1,177.2 | 1,000.7 | 476.9 | 453.1 | -24.6 | -24.6 | 4,663.0 |
| 1985 | 3,641.1 | 3,094.9 | 1,627.5 | 1,383.3 | 693.4 | 658.8 | -9.2 | -9.2 | 5,127.9 |
| 1990 | 3,791.2 | 3,222.6 | 1,388.8 | 1,180.5 | 585.4 | 556.1 | 417.4 | 417.4 | 5,376.5 |
| 1995 | 4,020.1 | 3,417.0 | 1,628.9 | 1,384.6 | 555.8 | 528.0 | 583.4 | 583.4 | 5,913.0 |
| 1996 | 4,575.0 | 3,888.7 | 1,890.9 | 1,607.2 | 546.4 | 519.1 | 372.4 | 372.4 | 6,387.4 |
| 1997 | 4,584.2 | 3,896.6 | 2,038.1 | 1,732.4 | 583.9 | 554.7 | 602.1 | 602.1 | 6,785.8 |
| 1998 | 4,008.3 | 3,407.1 | 1,672.6 | 1,421.7 | 558.6 | 530.7 | 518.5 | 518.5 | 5,878.0 |
| 1999 | 4,487.3 | 3,814.2 | 1,816.4 | 1,543.9 | 543.1 | 516.0 | 489.0 | 489.0 | 6,363.1 |
| 2000 | 6,027.4 | 5,123.3 | 2,460.7 | 2,091.6 | 560.9 | 532.8 | 495.9 | 495.9 | 8,243.6 |
| 2001 | 5,970.1 | 5,074.6 | 2,778.0 | 2,361.3 | 586.1 | 556.8 | 654.2 | 654.2 | 8,646.9 |
| 2002 | 5,660.5 | 4,811.4 | 2,327.1 | 1,978.0 | 604.3 | 574.1 | 557.9 | 557.9 | 7,921.5 |
| 2003 | 6,468.9 | 5,498.5 | 3,143.9 | 2,672.3 | 637.3 | 605.4 | 510.7 | 510.7 | 9,286.9 |
| 2004 | 7,776.8 | 6,610.3 | 3,333.8 | 2,833.8 | 672.2 | 638.6 | 572.1 | 572.1 | 10,654.8 |
| 2005 | 9,196.8 | 7,817.3 | 4,267.7 | 3,627.5 | 735.3 | 698.5 | 825.1 | 825.1 | 12,968.4 |
| 2006 | 10,283.6 | 8,741.0 | 3,799.6 | 3,229.6 | 828.4 | 787.0 | 581.6 | 581.6 | 13,339.3 |
| 2007 | 11,332.3 | 9,632.5 | 4,074.1 | 3,463.0 | 928.9 | 882.5 | 889.4 | 889.4 | 14,867.4 |
| 2008 | 13,160.4 | 11,186.4 | 4,616.6 | 3,924.1 | 1,162.4 | 1,104.3 | 831.6 | 831.6 | 17,046.4 |
| 2009 ^p | 9,101.5 | 7,736.3 | 3,459.5 | 2,940.6 | 1,091.6 | 1,037.0 | 790.1 | 790.1 | 12,503.9 |

In 2009, \$12.5 billion left the state, comprising 66.9 percent of Wisconsin's \$18.68 billion in end-use energy expenditures.

Like the other tables in this chapter, these dollar amounts do not include specific expenditures on renewable energy. The exception is where imported electricity is generation by renewable sources.

Source: Compiled from tables in this publication for Wisconsin petroleum, natural gas, coal and electricity use and prices, by economic sector,

Preliminary estimates.

Wisconsin Expenditures for Residential Energy, by Type of Fuel



In 2009, overall residential energy expenditures decreased by 9.9 percent (\$494.8 million) from 2008. Expenditures for all fuel types decreased, with the exception of electricity which saw a 0.5 percent increase.

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Petro | leum | Natur | al Gas | (| Coal | Elect | ricity | Total ^a |
|-------------------|-------|-------|---------|--------|------|------|---------|--------|--------------------|
| 1970 ^r | 142.6 | 29.5% | 133.5 | 27.6% | 15.5 | 3.2% | 191.9 | 39.7% | 483.5 |
| 1975r | 250.5 | 31.0% | 203.8 | 25.2% | 11.8 | 1.5% | 342.0 | 42.3% | 808.2 |
| 1980 ^r | 483.8 | 30.6% | 474.3 | 30.0% | 9.0 | 0.6% | 614.4 | 38.8% | 1,581.5 |
| 1985 ^r | 393.7 | 19.3% | 754.5 | 36.9% | 3.8 | 0.2% | 892.2 | 43.6% | 2,044.2 |
| 1990 ^r | 342.9 | 17.3% | 653.8 | 33.0% | 1.3 | 0.1% | 980.2 | 49.6% | 1,978.2 |
| 1995 ^r | 282.7 | 12.5% | 792.0 | 35.0% | 1.1 | 0.0% | 1,187.7 | 52.5% | 2,263.5 |
| 1996 ^r | 357.9 | 14.7% | 892.8 | 36.8% | 1.0 | 0.0% | 1,176.5 | 48.4% | 2,428.3 |
| 1997 ^r | 336.1 | 14.1% | 873.2 | 36.8% | 1.0 | 0.0% | 1,165.1 | 49.0% | 2,375.4 |
| 1998 ^r | 237.6 | 10.8% | 712.6 | 32.3% | 0.9 | 0.0% | 1,256.3 | 56.9% | 2,207.4 |
| 1999 ^r | 265.3 | 11.2% | 787.5 | 33.3% | 0.8 | 0.0% | 1,311.6 | 55.5% | 2,365.1 |
| 2000 ^r | 394.1 | 14.1% | 1,020.3 | 36.6% | 0.7 | 0.0% | 1,370.4 | 49.2% | 2,785.5 |
| 2001 ^r | 402.8 | 13.4% | 1,098.4 | 36.6% | 0.7 | 0.0% | 1,500.2 | 50.0% | 3,002.1 |
| 2002 ^r | 359.0 | 11.9% | 1,008.2 | 33.5% | 0.7 | 0.0% | 1,638.5 | 54.5% | 3,006.3 |
| 2003 ^r | 404.9 | 11.3% | 1,313.7 | 36.8% | 0.6 | 0.0% | 1,852.3 | 51.9% | 3,571.4 |
| 2004 ^r | 505.0 | 13.3% | 1,367.9 | 36.1% | 0.6 | 0.0% | 1,915.6 | 50.6% | 3,789.0 |
| 2005 ^r | 607.6 | 14.3% | 1,564.2 | 36.9% | 0.6 | 0.0% | 2,065.8 | 48.7% | 4,238.2 |
| 2006 ^r | 650.6 | 15.1% | 1,467.7 | 34.1% | 0.5 | 0.0% | 2,190.5 | 50.8% | 4,309.2 |
| 2007 ^r | 668.0 | 14.6% | 1,577.3 | 34.5% | 0.4 | 0.0% | 2,332.0 | 50.9% | 4,577.8 |
| 2008 ^r | 787.4 | 15.7% | 1,799.8 | 36.0% | 0.0 | 0.0% | 2,415.5 | 48.3% | 5,002.7 |
| 2009 ^p | 630.7 | 14.0% | 1,448.8 | 32.1% | 0.0 | 0.0% | 2,428.4 | 53.9% | 4,507.9 |

Source: Compiled from tables in this publication for Wisconsin residential energy use and prices.

 $^{{\}bf a} \ \ {\hbox{Does not include renewable energy, except those renewable fuels used in electricity production.}$

p Preliminary estimates.

 $[{]f r}$ Revised due to revisions in price and consumption data.

Wisconsin Expenditures for Commercial Energy, by Type of Fuel

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Petro | leum | Natura | al Gas | C | oal | Elect | ricity | Totala |
|-------------------|-------|-------|---------|--------|------|------|---------|--------|---------|
| 1970 ^r | 34.7 | 15.9% | 34.6 | 15.9% | 11.5 | 5.3% | 137.1 | 62.9% | 217.9 |
| 1975 ^r | 70.8 | 16.5% | 73.5 | 17.2% | 11.0 | 2.6% | 273.0 | 63.7% | 428.4 |
| 1980 ^r | 82.4 | 9.6% | 210.6 | 24.6% | 6.8 | 0.8% | 555.4 | 64.9% | 855.2 |
| 1985 ^r | 104.5 | 8.5% | 307.4 | 25.0% | 9.3 | 0.8% | 807.9 | 65.7% | 1,229.1 |
| 1990 ^r | 92.8 | 6.9% | 314.8 | 23.6% | 8.2 | 0.6% | 920.0 | 68.9% | 1,335.8 |
| 1995 ^r | 73.7 | 4.9% | 381.8 | 25.4% | 6.2 | 0.4% | 1,042.8 | 69.3% | 1,504.5 |
| 1996 ^r | 95.6 | 5.9% | 458.4 | 28.3% | 7.8 | 0.5% | 1,055.8 | 65.3% | 1,617.6 |
| 1997 ^r | 85.0 | 5.2% | 474.5 | 29.2% | 7.7 | 0.5% | 1,057.3 | 65.1% | 1,624.5 |
| 1998 ^r | 57.7 | 3.6% | 382.2 | 24.1% | 7.9 | 0.5% | 1,134.9 | 71.7% | 1,582.8 |
| 1999 ^r | 66.5 | 3.9% | 395.3 | 23.4% | 8.0 | 0.5% | 1,221.9 | 72.2% | 1,691.8 |
| 2000 ^r | 103.6 | 5.4% | 513.9 | 26.8% | 8.0 | 0.4% | 1,290.8 | 67.4% | 1,916.4 |
| 2001 ^r | 104.1 | 5.1% | 579.0 | 28.1% | 8.6 | 0.4% | 1,370.3 | 66.5% | 2,062.1 |
| 2002r | 91.3 | 4.4% | 525.4 | 25.2% | 8.8 | 0.4% | 1,457.8 | 70.0% | 2,083.3 |
| 2003 ^r | 125.2 | 5.6% | 695.2 | 31.2% | 9.2 | 0.4% | 1,397.9 | 62.8% | 2,227.5 |
| 2004 ^r | 150.1 | 6.5% | 715.4 | 30.8% | 10.0 | 0.4% | 1,444.5 | 62.3% | 2,319.9 |
| 2005 ^r | 202.2 | 7.2% | 894.0 | 32.0% | 12.2 | 0.4% | 1,684.9 | 60.3% | 2,793.3 |
| 2006 ^r | 192.8 | 6.5% | 888.0 | 30.0% | 13.6 | 0.5% | 1,860.7 | 63.0% | 2,955.1 |
| 2007 ^r | 204.2 | 6.5% | 923.3 | 29.4% | 11.6 | 0.4% | 2,006.1 | 63.8% | 3,145.2 |
| 2008 ^r | 299.6 | 8.5% | 1,087.6 | 30.8% | 8.9 | 0.3% | 2,132.4 | 60.4% | 3,528.4 |
| 2009 ^p | 209.6 | 6.6% | 842.6 | 26.7% | 6.8 | 0.2% | 2,095.2 | 66.4% | 3,154.3 |

WISCONSIN **EXPENDITURES** FOR COMMERCIAL **ENERGY** 10.6%

Commercial energy expenditures decreased 10.6 percent (\$374.1 million) in 2009. Commercial energy expenditures are dominated (66.4 percent) by electricity used for lighting, cooling, ventilation and office equipment.

Source: Compiled from tables in this publication for Wisconsin commercial energy use and prices.

a Does not include renewable energy, except those renewable fuels used in electricity production.

p Preliminary estimates.

r Revised due to revisions in price and consumption data.

Wisconsin Expenditures for Industrial Energy, by Type of Fuel

WISCONSIN **EXPENDITURES** FOR **INDUSTRIAL ENERGY** 18.1%

In 2009, industrial energy expenditures decreased 18.1 percent (\$622.8 million). Industrial energy use is dominated by electricity (52.2 percent) and natural gas (34.1 percent). Expenditures for all fuels decreased: petroleum, 34.4 percent; electricity, 8.1 percent; natural gas, 28.6 percent; and coal, 2.4 percent.

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Petro | leum | Natur | al Gas | C | oal | Elect | ricity | Totala |
|-------------------|-------|------|---------|--------|-------|-------|---------|--------|---------|
| 1970 ^r | 18.7 | 6.5% | 79.4 | 27.8% | 63.1 | 22.1% | 124.0 | 43.5% | 285.2 |
| 1975r | 46.7 | 9.2% | 174.2 | 34.2% | 63.4 | 12.4% | 225.1 | 44.2% | 509.4 |
| 1980 ^r | 64.1 | 6.5% | 450.8 | 45.5% | 73.2 | 7.4% | 402.1 | 40.6% | 990.3 |
| 1985r | 58.2 | 4.4% | 559.9 | 41.9% | 108.5 | 8.1% | 610.6 | 45.7% | 1,337.1 |
| 1990 ^r | 117.6 | 9.0% | 413.2 | 31.7% | 93.5 | 7.2% | 678.5 | 52.1% | 1,302.8 |
| 1995 ^r | 80.3 | 5.8% | 432.8 | 31.0% | 78.3 | 5.6% | 804.8 | 57.6% | 1,396.1 |
| 1996 ^r | 114.9 | 7.7% | 517.4 | 34.7% | 72.5 | 4.9% | 785.8 | 52.7% | 1,490.6 |
| 1997 ^r | 106.0 | 6.4% | 627.4 | 38.0% | 71.7 | 4.3% | 844.6 | 51.2% | 1,649.7 |
| 1998 ^r | 84.3 | 5.3% | 513.9 | 32.5% | 69.5 | 4.4% | 912.5 | 57.7% | 1,580.1 |
| 1999 ^r | 104.7 | 6.4% | 569.2 | 34.6% | 65.5 | 4.0% | 905.0 | 55.0% | 1,644.5 |
| 2000 ^r | 149.0 | 7.4% | 831.4 | 41.5% | 71.3 | 3.6% | 950.5 | 47.5% | 2,002.3 |
| 2001 ^r | 172.6 | 7.5% | 993.7 | 43.5% | 81.6 | 3.6% | 1,038.7 | 45.4% | 2,286.5 |
| 2002 ^r | 121.0 | 6.2% | 719.0 | 36.7% | 92.0 | 4.7% | 1,024.8 | 52.4% | 1,956.8 |
| 2003r | 98.9 | 4.3% | 992.4 | 42.8% | 88.9 | 3.8% | 1,141.0 | 49.2% | 2,321.2 |
| 2004 ^r | 150.8 | 5.8% | 1,113.0 | 42.7% | 98.6 | 3.8% | 1,243.7 | 47.7% | 2,606.1 |
| 2005 ^r | 243.2 | 8.1% | 1,293.9 | 42.8% | 115.5 | 3.8% | 1,367.8 | 45.3% | 3,020.4 |
| 2006 ^r | 285.0 | 9.5% | 1,120.4 | 37.2% | 132.0 | 4.4% | 1,472.0 | 48.9% | 3,009.5 |
| 2007r | 308.6 | 9.7% | 1,165.5 | 36.6% | 139.7 | 4.4% | 1,566.9 | 49.3% | 3,180.6 |
| 2008r | 294.8 | 8.5% | 1,349.4 | 39.1% | 197.9 | 5.7% | 1,606.1 | 46.6% | 3,448.2 |
| 2009 ^p | 193.5 | 6.8% | 962.8 | 34.1% | 193.2 | 6.8% | 1,475.9 | 52.2% | 2,825.4 |

Source: Compiled from tables in this publication for Wisconsin industrial energy use and prices.

 $^{{\}bf a} \ \ {\hbox{Does not include renewable energy, except those renewable fuels used in electricity production.}}$

p Preliminary estimates.

r Revised due to revisions in price and consumption data.

Wisconsin Expenditures for Agricultural Energy, by Type of Fuel

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Motor Gasoline | Diesel Fuel ^a | LPG | Other Fuel ^b | Total Pe | troleum | Elec | tricity | Total ^c |
|-------------------|-------------------|-----------------------------|------|----------------------------|----------|---------|-------|---------|--------------------|
| 1970 | 19.1 | 9.8 | 5.2 | | 34.1 | 58.1% | 24.6 | 41.9% | 58.7 |
| 1975 | 30.9 | 24.1 | 10.8 | | 65.8 | 62.7% | 39.1 | 37.3% | 104.9 |
| 1980 | 38.7 | 94.8 | 22.9 | | 156.4 | 67.3% | 76.0 | 32.7% | 232.4 |
| 1985 | 22.4 | 98.3 | 27.8 | | 148.5 | 57.4% | 110.3 | 42.6% | 258.8 |
| 1990 | 9.6 | 88.1 | 22.4 | | 120.1 | 55.6% | 95.7 | 44.4% | 215.8 |
| 1995 | 6.6 | 80.8 | 23.1 | | 110.5 | 54.5% | 92.2 | 45.5% | 202.7 |
| 1996 | 6.5 | 87.4 | 34.7 | | 128.6 | 58.8% | 90.0 | 41.2% | 218.6 |
| 1997 | 6.1 | 83.6 | 31.4 | | 121.1 | 57.9% | 88.2 | 42.1% | 209.3 |
| 1998 | 5.4 | 71.3 | 18.6 | | 95.3 | 50.9% | 91.9 | 49.1% | 187.2 |
| 1999 | 5.9 | 81.1 | 21.2 | | 108.3 | 54.1% | 91.7 | 45.9% | 200.0 |
| 2000 | 7.1 | 108.8 | 27.5 | | 143.4 | 60.5% | 93.8 | 39.5% | 237.2 |
| 2001 | 7.0 | 100.5 | 29.1 | | 136.6 | 58.2% | 98.3 | 41.8% | 234.9 |
| 2002 | 6.4 | 94.7 | 24.9 | | 126.0 | 55.5% | 101.0 | 44.5% | 227.1 |
| 2003 | 7.5 | 111.2 | 28.4 | | 147.1 | 57.0% | 111.2 | 43.0% | 258.3 |
| 2004 | 9.0 | 126.5 | 33.4 | | 169.0 | 60.9% | 108.7 | 39.1% | 277.7 |
| 2005 | 63.3 | 115.2 | 37.8 | 3.2 | 219.5 | 64.1% | 123.2 | 35.9% | 342.7 |
| 2006 | 60.1 | 199.5 | 48.5 | 4.8 | 312.9 | 70.4% | 131.7 | 29.6% | 444.6 |
| 2007 | 75.7 | 241.6 | 47.0 | 4.8 | 369.0 | 75.4% | 120.1 | 24.6% | 489.2 |
| 2008r | 70.4 | 294.6 | 73.6 | 5.8 | 444.4 | 76.3% | 137.9 | 23.7% | 582.3 |
| 2009 ^p | 60.4 | 217.0 | 69.4 | 10.4 | 357.1 | 72.3% | 137.1 | 27.7% | 494.2 |

WISCONSIN'S AGRICULTURAL **ENERGY BILL**

Wisconsin's agricultural energy bill is 15.1 percent less than 2008, a decrease of \$88.0 million.

Source: Compiled from tables in this publication for Wisconsin agricultural energy use and prices.

a Includes fuel oil and kerosene through 2004.

 $^{{\}bf b} \ {\hbox{This fuel is primarily distillate and kerosene, but may include small amounts of coal and wood.}}$

 $[{]f c}$ Does not include renewable energy, except those renewable fuels used in electricity production.

p Preliminary estimates.

r Revised due to revisions in price and consumption data.

Wisconsin Expenditures for Transportation Energy, by Type of Fuel

WISCONSIN'S TRANSPORTATION **ENERGY BILL**

Wisconsin's transportation energy bill decreased 31.9 percent (\$3.6 billion dollars) in 2009. Vehicle gasoline accounts for 76.8 percent of all transportation expenditures, costing motorists \$5.9 billion.

1970-2009 MILLIONS OF DOLLARS AND PERCENT OF TOTAL

| Year | Vehicle (| Gasolinea | Diese | l Fuel | Aviation | Gasoline | Jet | Fuel | Middle [| Distillate | Total |
|-------------------|-----------|-----------|---------|--------|----------|----------|-------|------|----------|------------|----------|
| 1970 | 626.2 | 94.3% | 23.0 | 3.5% | 2.4 | 0.4% | 5.9 | 0.9% | 6.3 | 0.9% | 664.3 |
| 1975 | 1,187.1 | 91.1% | 74.3 | 5.7% | 4.5 | 0.3% | 21.2 | 1.6% | 13.8 | 1.1% | 1,302.7 |
| 1980 | 2,531.3 | 84.7% | 335.7 | 11.2% | 8.4 | 0.3% | 72.7 | 2.4% | 37.8 | 1.3% | 2,988.9 |
| 1985 | 2,369.2 | 81.0% | 469.6 | 16.1% | 5.5 | 0.2% | 52.0 | 1.8% | 23.7 | 0.8% | 2,923.7 |
| 1990 | 2,429.1 | 78.2% | 571.2 | 18.4% | 6.1 | 0.2% | 71.5 | 2.3% | 25.0 | 0.8% | 3,106.0 |
| 1995 | 2,661.8 | 76.8% | 724.3 | 20.9% | 6.5 | 0.2% | 50.9 | 1.5% | 22.7 | 0.7% | 3,466.2 |
| 1996 | 2,974.7 | 76.8% | 798.0 | 20.6% | 7.1 | 0.2% | 62.5 | 1.6% | 29.2 | 0.8% | 3,871.5 |
| 1997 | 3,006.2 | 76.5% | 830.7 | 21.1% | 7.2 | 0.2% | 60.3 | 1.5% | 24.6 | 0.6% | 3,929.0 |
| 1998 | 2,692.2 | 76.3% | 761.4 | 21.6% | 6.0 | 0.2% | 47.6 | 1.3% | 19.6 | 0.6% | 3,526.7 |
| 1999 | 2,993.5 | 76.1% | 852.0 | 21.7% | 7.4 | 0.2% | 55.6 | 1.4% | 25.7 | 0.7% | 3,934.2 |
| 2000 | 3,994.0 | 76.4% | 1,101.5 | 21.1% | 8.7 | 0.2% | 85.3 | 1.6% | 37.8 | 0.7% | 5,227.3 |
| 2001 | 3,973.1 | 77.2% | 1,054.6 | 20.5% | 8.4 | 0.2% | 73.8 | 1.4% | 35.7 | 0.7% | 5,145.7 |
| 2002 | 3,844.1 | 77.6% | 997.7 | 20.1% | 6.6 | 0.1% | 72.2 | 1.5% | 31.5 | 0.6% | 4,952.1 |
| 2003 | 4,447.9 | 78.2% | 1,113.0 | 19.6% | 6.6 | 0.1% | 83.8 | 1.5% | 33.6 | 0.6% | 5,684.8 |
| 2004 | 5,228.9 | 77.0% | 1,388.3 | 20.4% | 7.8 | 0.1% | 121.4 | 1.8% | 44.4 | 0.7% | 6,790.8 |
| 2005 | 5,946.7 | 75.3% | 1,684.0 | 21.3% | 9.7 | 0.1% | 193.6 | 2.5% | 67.8 | 0.9% | 7,901.8 |
| 2006 | 6,550.7 | 74.3% | 1,964.7 | 22.3% | 9.8 | 0.1% | 213.2 | 2.4% | 83.1 | 0.9% | 8,821.5 |
| 2007 | 7,347.7 | 75.4% | 2,083.3 | 21.4% | 9.6 | 0.1% | 207.0 | 2.1% | 103.8 | 1.1% | 9,751.4 |
| 2008r | 8,191.6 | 72.4% | 2,667.5 | 23.6% | 10.5 | 0.1% | 332.8 | 2.9% | 109.5 | 1.0% | 11,311.9 |
| 2009 ^p | 5,911.7 | 76.8% | 1,528.8 | 19.8% | 6.7 | 0.1% | 200.1 | 2.6% | 55.2 | 0.7% | 7,702.4 |

Source: Compiled from tables in this publication for Wisconsin transportation energy use and prices.

a Includes ethanol.

 $[{]f r}$ Revised due to revisions in price and consumption data.